Increased competition is driving equipment manufacturers to cut costs and reduce development time, while dramatically increasing functionality and performance levels. An industry standard COTS (Commercial-Off-The-Shelf) carrier-grade Linux product from MontaVista is designed for telecommunications and data communications with requirements for high availability, fault management and real-time performance.

As the revenue focus of networks expands from voice to include media and rich data, the applications that run the Internet infrastructure are getting more complex, demanding a higher level of reliability. The cost of managing these complex applications is increasing faster than the cost of building them. Computer systems are in tremendous need of a way to manage this complexity. Forward thinkers understand that the only solution to this increasing complexity is to create systems that can look after themselves; autonomic systems.

Solid is the first provider of an Autonomic Data Management Platform that provides the nervous system for autonomic computing applications. It is a reliable, self-directed, shared data foundation that not only supports the local intelligence of autonomic applications, but it also automates the communication of key control information between the various parts of the system. It combines traditional data management technologies with novel data distribution functionality. Solid’s platform supports the creation of applications that are self-configuring, self-healing, self-tuning and self-protecting. It is designed specifically to address the data management issues of the distributed, highly available, complex systems seen in the network infrastructure, mobile telematics applications, digital home network solutions, and distributed environments.

The Solid platform is made up of a suite of products that integrate into a zero maintenance package: the relational data managers, Solid EmbeddedEngine™ and Solid BoostEngine™; Solid CarrierGrade Option™ high availability option, and Solid SmartFlow Option™ the distributed data manager.
Local Data Management
At the heart of the suite is a pair of streamlined, feature-rich, high-performance relational database management systems (RDBMS), Solid EmbeddedEngine and Solid BoostEngine. Designed to run in unattended, autonomic mode, Solid BoostEngine and Solid EmbeddedEngine share an identical feature set, except that BoostEngine allows the developer to specify which data should be located in memory rather than on disk. BoostEngine can increase application speed by up to ten times, and provides a way to tune application performance against system cost. The Solid data managers run on all versions of MontaVista Linux, and are suited for local data management in applications as diverse as blade servers and telematics devices.

Zero Maintenance
This optimized product suite is encapsulated into a zero administration framework to create an easy-to-manage platform that takes care of the control and content data within complex application environments.

The Solid Advantage With MontaVista Linux
Whether your application need is for local data management in an isolated application, or control of a complex system distributed across blades, devices and space, the Solid Autonomic Data Management Platform running on the premier Carrier Grade Linux platform from MontaVista Software, makes sure the data takes care of itself, autonomously and reliably. It provides faster time to market at a lower cost, and enables you to deliver a more robust, fully featured application to your customers or end users.

Hot-Standby
Using the Solid CarrierGrade Option™, the database managers can be configured in a hot-standby mode, in which they maintain an identical redundant pair of databases. In this manner, they provide carrier-grade data availability. The Solid CarrierGrade Option is certified on MontaVista Linux Carrier Grade Edition, and this configuration is often used to manage the data in redundant controller cards in blade servers.

Data Distribution
An add-on to the database managers is the Solid SmartFlow Option™, a communication agent that automatically distributes data, under central policy control, throughout a network of databases. The most complex systems of today – the ones most in need of autonomic data management – are highly distributed. They include complex applications running across blade servers, applications distributed to mobile or other remote sites, and complex media applications delivered to naive home users. Key to supporting such applications is the ability to distribute data reliably, recoverably and transactionally. Since many distributed applications are only connected intermittently, Solid provides the ability to self-heal global data integrity from inconsistencies that can arise from disconnected operations. In addition, MontaVista Linux Carrier Grade Edition provides hardened drivers, resource monitoring and event logging, as well as network failover to preserve the integrity of distributed communications. Solid SmartFlow Option guarantees the automatic delivery of data and transactions throughout the network, optimizes its use of network bandwidth, and provides an intelligent way to maintain global data integrity in a highly distributed system.